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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,766	10/12/2005	Abraham Karel Riemens	NL030383	2221
24737 7590 09/11/2007 PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			EXAMINER NGUYEN, THAN VINH	
			ART UNIT 2187	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary

Application No.

10/552,766

Applicant(s)

RIEMENS ET AL.

Examiner

Than Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/12/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-22 are pending.
2. The IDS, filed 10/12/05, has been considered.
3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. As to claim 1, the language "the memory system, which is capable of performing selectable length multi-address memory transfers starting from the preferred starting addresses only, **or with less overhead than starting from other addresses than the preferred starting addresses**". The phrase indicated in bold is vague and indefinite. The Examiner does not know what Applicant is claiming with this language. Clarification is required of what this language mean. Claims 2-13 are also rejected for incorporating the same error.
7. Claim 4 recites the limitation "the signal" in line 4. There is insufficient antecedent basis for this limitation in the claim.

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8. As to claim 14, the language “a memory system that has memory addresses comprising a subset of equidistant preferred starting addresses from which multi-address memory transfers can be started exclusively, **or with less overhead than from other addresses than the preferred starting addresses**”. The phrase indicated in bold is vague and indefinite. The Examiner does not know what Applicant is claiming with this language. Clarification is required of what this language mean. Claims 15-22 are also rejected for incorporating the same error.

9. Claim 15 recites the limitation "decompressed data-items" in line 2. There is insufficient antecedent basis for this limitation in the claim. There is no antecedent basis for decompressing data-items.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1,3-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Luick (US 20050071579).

As to claim 1:

12. Luick teaches an apparatus for processing data-items each associated with a respective data address in a range of data addresses, wherein compressed blocks representing the data items are stored in a memory system, memory addresses occupied by each block starting from a

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respective preferred starting address for multi address transfer of the memory system, each block representing compressed data-items associated with data addresses in a respective sub-range of the range, the sub-ranges being successively contiguous, each particular sub-range having a length corresponding to an address distance between the preferred starting address from which addresses of the particular block that represents the data-items in the particular sub-range start and the preferred starting address from which addresses of a next one of the blocks for a next successive sub-range start, leaving memory addresses not occupied by the particular block in between blocks, the apparatus comprising the memory system (memory 104; par. 0029), which is capable of performing selectable length multi-address memory transfers starting from the preferred starting addresses only, or with less overhead than starting from other addresses than the preferred starting addresses; a processing element for processing the data-items (processor; par. 0015); a decompressor coupled between the processing element and the memory system (decompressor 304; par. 0035, 0036), the decompressor being arranged to start a multi address memory transfer of a required one of the blocks from the memory system dynamically when the processing element requires access to the block (transfer blocks of data to decompressor; par. 0036-0037), leaving memory addresses directly following the block up to a preferred starting address for a next one of the blocks untransferred in the transfer, and to decompress the data-items from the required one of the blocks before passing the data-items to the processing element (decompress data; par. 0036-0037).

As to claim 3:

13. Luick teaches the decompressor is arranged to send a signal to the memory system to terminate the multi-address memory transfer of the required one of the blocks when a number of

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words, selected dependent on the length of the required one of the blocks, has been transferred (end data transfer if all the data blocks have been transferred; par. 0033, 0036, 0037).

As to claim 4:

14. Luick teaches the decompressor is arranged to retrieve information representing the length of the required one of the blocks from the multi address memory transfer, the decompressor generating the signal dependent on said information (retrieve block size data; 0014-0016).

As to claim 5,16-18:

15. Luick teaches wherein the decompressor is arranged to retrieve information representing the length of the required one of the blocks from a multi address memory transfer of a preceding retrieved block, retrieved preceding the required one of the blocks (retrieve block size data; 0014-0016) and to send a transfer length selection signal to the memory system derived from the information at the start of the multi address memory transfer for the required one of the blocks (signal to change block size; 0037, 0040, 0041).

As to claim 6:

16. Luick teaches the lengths of the sub-ranges are mutually equal and larger than a distance between successive preferred starting addresses, the decompressor being arranged to start subsequent multi-address memory transfers for the required one of the blocks conditionally dependent on the length of the block (transfer of data dependent on block size; 0014-0017).

As to claim 7:

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17. Luick teaches each block comprises a plurality of sub-blocks that are decompressible independently of one another, each sub-block corresponding to a respective equal sized part of the sub-range for the block, the decompressor comprising a buffer memory region, for buffering the sub-blocks of compressed data read during the multi-address memory transfer, an intermediate memory region for storing data decompressed from the sub-blocks successively, the decompressor replacing the decompressed data from respective sub-blocks read during the memory transfer with one another successively in the intermediate memory (cache 107 temporarily holds decompressed data; par. 0015, 0016, 0029) .

As to claim 8,19:

18. Luick teaches the decompressor is arranged to apply decompression corresponding to lossy block compression (lossy block compression; par. 0051).

As to claim 9,20:

19. Luick teaches the decompressor is arranged to apply decompression corresponding to variable length block compression (variable length data compression; par. 0008).

As to claim 10:

20. Luick teaches the sub-ranges have mutually equal lengths (equal size blocks; par. 0033, 0037).

As to claim 11:

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21. Luick teaches a compressor for compressing the data items associated with respective ones of the sub-ranges that has a length equal to the distance between a pair of preferred starting addresses, the compressor compressing the data items associated with a respective one of the sub-ranges each into a respective one of the blocks, the compressor being arranged to store the compressed blocks into the memory system using a respective multi-address memory transfer for each respective one of the blocks, each transfer starting from a respective one of the preferred starting addresses, the decompressor terminating the multi-address memory transfers upon completion of storing each block, without writing up to a next preferred starting address when not required for the block (compressor 306 compressing data based on transferred data blocks; par. 0015, 0016, 0036, 0037).

As to claim 12:

22. Luick teaches the processing element computes the data-items for compression and the compressor is arranged to receive the data items for compression from the processing element (calculate for data compression; par. 0037-0042).

As to claim 13,21:

23. Luick teaches the compressor is arranged to adapt a compression ratio for compression of the data dependent on a dynamically measured level of available bandwidth for access to the memory system (compression ratio calculation; 0017; 0027; 0036-0038).

As to claim 14,22:

24. Luick teaches a method of processing a set of data-items, in which each data-item is associated with a respective data address in a range of data addresses, the method comprising providing a memory system (memory 104; par. 0029) that has memory addresses comprising a subset of equidistant preferred starting addresses from which multi-address memory transfers can be started exclusively, or with less overhead than from other addresses than the preferred starting addresses; storing compressed blocks in the memory system, addresses used for each respective one of the blocks starting from a respective one of the preferred starting addresses, each block representing compressed data-items associated with data addresses in a respective sub-range of the range, the sub-ranges being successively contiguous, each particular sub-range having a length corresponding to an address distance between the preferred starting address from which the particular block that represents the data-items in the particular sub-range starts and the preferred starting address from which a next one the blocks for a next successive sub-range starts, leaving memory addresses not occupied by the particular block in between (compressor 306 compressing data based on transferred data blocks; par. 0015, 0016, 0036, 0037)..

As to claim 15:

25. Luick teaches processing decompressed data-items derived from the blocks (par. 0036); retrieving a required one of the blocks from the memory system for said processing, by means of a multi-address memory transfer starting from the preferred starting address starting from which the required one of the blocks is stored and terminating the multi-address memory transfer for the required one of the blocks according to a length of the required one of the blocks, leaving content of memory addresses directly following addresses used for the required one of the blocks untransferred (transfer of data for processing; 0036).

Allowable Subject Matter

26. Claim 2 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

27. As to claim 2., the prior art does not further teach the processing element is arranged to indicate, to the decompressor, a decompression option selected from a series of different decompression options that require successively less addresses starting from the preferred starting address of the required one of the blocks to be transferred, the decompressor setting the length of the memory transfer dependent indicated decompression option.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Than Nguyen whose telephone number is 571-272-4198. The examiner can normally be reached on 8am-3pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on (571) 272-4201. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Than Nguyen
Primary Examiner
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